

AMENDMENT TO THE CLAIMS:

Please amend Claims 1, 2, 4, 11, 14, 19, 21, 24 and 27 as follows:

Claim 1 (currently amended): A grid falling film devolatilizer comprising:

a tower housing having a round, square or rectangle cross section;

a liquid distributor for distributing liquid within said tower housing; and

one or more internal towers arranged in said tower housing in a parallel manner, for continuously forming and regenerating a large surface of film material using the liquid supplied by said liquid distributor;

wherein each said internal tower ~~has four corners~~ consists of pillars and multiple grid trays, and four pillars ~~standing stand~~ respectively at the four corners of said internal tower ~~which has a square or rectangle cross section, respectively, and multiple grid trays supported by said internal tower and numbering in the range of between~~ and wherein the number of said grid trays is from 2 to 500, and each pair of neighboring grid ~~plates~~ trays having an a layer interval in the range of about 20 to 500 mm;

wherein each said grid tray includes a pair of beams, a plurality of grid bars and corresponding guide members;

wherein said beams are located at opposite ~~pair of~~ sides of said grid tray, in a horizontal plane of same height, and are fixed to said pillars;

wherein said grid bars are fixed perpendicularly to said beams and are arranged in either single tier, double tiers or multiple tiers in a parallel manner;

wherein said grid bars have a cross-section of triangle, reverse "V" shape;

wherein said guide members include guide mesh and a clamp for fixation of said guide mesh and

wherein said guide members are disposed at a grid gap between said two neighboring grid ~~plates~~ bars and parallel to said grid ~~plates~~ bars, and said corresponding clamps are fixed to said beams; and

wherein the outmost grid bars in each said grid tray are formed as inclines or bent strips which present a larger vertical surface and serve as baffles for keeping liquid level in each said grid tray or the clamps of the outmost guide members in each said grid tray are extended so as to

be higher than other said clamps and serve as baffles for keeping the liquid level in each said grid tray.

Claim 2 (currently amended): The grid falling film devolatilizer according to Claim 1, wherein hangers are provided on the upper part of the pillars ~~(3-1)~~ and supporting brackets are provided on the upper part of the tower housing; wherein said hangers are mounted on said supporting brackets and fastened with bolts, so that said internal tower is mounted inside said tower housing; and wherein locating blocks are provided on the lower part of said pillars and matching stoppers are provided on the lower part of said tower housing for limiting the swing of the bottom of said internal tower.

Claim 3 (previously presented): The grid falling film devolatilizer according to Claim 1, wherein the number of said multiple grid trays is from 5 to 200 and said layer interval between two neighboring grid trays is from 40 to 250mm.

Claim 4 (currently amended): The grid falling film devolatilizer according to Claim 1, wherein said grid bars in two neighboring grid trays are arranged in a manner selected from the group consisting of: a) being arranged in the same direction but staggered by half a film interval; b) ~~cross~~ being crossed at 90 degrees; and c) ~~a hybrid of a) and b)~~ being arranged in the same direction but staggered by half a film interval and being crossed at 90 degrees.

Claim 5 (previously presented): The grid falling film devolatilizer according to Claim 1, wherein said guide meshes are woven metal wires, metal sheets, perforated metal sheets, expanded metal meshes, tube array or non-metal meshes; and wherein said guide meshes can be directly fixed below said grids, eliminating said clamps.

Claim 6 (previously presented): The grid falling film devolatilizer according to Claim 5, wherein said tube array is formed by joining two corrugated sheets in a face-to-face manner and fixing them with butt welding, and introducing heating or cooling medium thereinto.

Claim 7 (previously presented): The grid falling film devolatilizer according to Claim 1, wherein an overflowing film-forming mechanism is employed, wherein said clamps are placed at two sides of a grid bar to constitute a grid funnel and said clamps act as overflow weirs.

Claim 8 (previously presented): The grid falling film devolatilizer according to Claim 7, wherein a grid bar is disposed above two adjacent clamps that belong to two neighboring grid funnels respectively, and the width of the said grid bar is no less than the interval between the two clamps thereunder; and wherein said grid funnels in two adjacent grid trays cross at 90 degrees, or alternatively are arranged in the same direction while the grid funnels are staggered by half an interval of said grid funnel.

Claim 9 (previously presented): The grid falling film devolatilizer according to the Claim 7, wherein said grid funnels in two adjacent grid trays are arranged in the same direction but staggered by half an interval of grid funnel.

Claim 10 (previously presented): The grid falling film devolatilizer according to Claim 1, wherein the grid bars in said grid trays are arranged in such a manner that width of grid gaps in said grid trays are gradually increased from top to bottom.

Claim 11 (currently amended): A grid falling film devolatilizer comprising:

a tower housing having a round, square or rectangular cross section;

a liquid distributor for distributing liquid within said tower housing;

one or more internal towers arranged in said tower housing in a parallel manner, for continuously forming and regenerating a large surface of film material using liquid from said liquid distributor;

wherein each said internal tower has consists of pillars and multiple grid trays, and four pillars stand respectively at four corners of said internal tower which has a square or rectangle cross section; wherein the number of grid trays is 2 to 500, and each pair of neighboring grid trays having a layer interval in the range of about 20 to 500 mm; and

~~(i) a round, square or rectangle cross section;~~

~~(ii) four corners;~~

~~_____ (iii) four pillars standing at said four corners of said internal tower, respectively,~~
and

~~_____ (iv) multiple grid trays supported within said internal tower and numbering~~
~~between 2 to 500;~~

~~_____ wherein each pair of neighboring grid plates having an interval in the range of about 20 to~~
~~500 mm; and~~

wherein each said grid tray comprises a pair of beams, a plurality of grid bars and
corresponding guide members.

Claims 12 and 13 (canceled)

Claim 14 (currently amended): The grid falling film devolatilizer of claim 11, wherein said
beams are located at opposite pair of sides of said grid tray, in a horizontal plane of same height,
and are fixed to said pillars.

Claim 15 (previously presented): The grid falling film devolatilizer of claim 14, wherein said
grid bars are fixed perpendicularly to said beams and are arranged in single tier, double tiers or
multiple tiers in a parallel manner.

Claim 16 (previously presented): The grid falling film devolatilizer of claim 15, wherein said
grid bars have a cross-section of triangle, reverse "V" shape formed by bending thin metal strips,
circle or other shapes.

Claim 17 (previously presented): The grid falling film devolatilizer of claim 11, said guide
members comprise guide mesh and a clamp for fixation of said guide mesh, and are disposed at a
grid gap between the two neighboring grid bars and parallel to the grid bars, the corresponding
clamps are fixed to the beams.

Claim 18 (previously presented): The grid falling film devolatilizer of claim 17, the outmost grid
bars in said grid tray are formed as inclines or bent strips which present a larger vertical surface
and serve as baffles for keeping liquid level in said grid tray; or the clamps of the outmost guide

members in said grid tray are extended to be higher than others and serve as baffles for keeping the liquid level in said grid tray.

Claim 19 (currently amended): The grid falling film devolatilizer according to Claim 11, wherein hangers are provided on the upper part of said pillars and supporting brackets are provided on the upper part of the tower housing; and wherein said hangers are mounted on said supporting brackets and fastened with bolts, so that said internal tower is mounted inside the tower housing; and the locating blocks are provided on the lower part of the pillars and the matching stoppers are provided on the lower part of the tower housing for limiting the swing of the bottom of the internal tower.

Claim 20 (previously presented): The grid falling film devolatilizer according to Claim 11, wherein the number of the said multiple grid trays is in the range of from 5 to 200 and the layer interval between two neighboring grid trays is in the range of from 40 to 250mm.

Claim 21 (currently amended): The grid falling film devolatilizer according to Claim 11, wherein said grid bars in two neighboring grid trays are arranged in a manner selected from the group consisting of: a) being arranged in the same direction but staggered by half a film interval; b) cross being crossed at 90 degrees; and c) a hybrid of a) and b) being arranged in the same direction but staggered by half a film interval and being crossed at 90 degrees.

Claim 22 (previously presented): The grid falling film devolatilizer according to Claim 17, wherein said guide meshes are woven metal wires, metal sheets, perforated metal sheets, expanded metal meshes, tube array or non-metal meshes; and wherein said guide meshes can be directly fixed below the grids, eliminating said clamps.

Claim 23 (previously presented): The grid falling film devolatilizer according to Claim 22, wherein said tube array is formed by joining two corrugated sheets in a face-to-face manner and fixing them with butt welding, and introducing heating or cooling medium thereinto.

Claim 24 (currently amended): The grid falling film devolatilizer according to Claim ~~13~~ 11, wherein an overflowing film-forming mechanism is employed, and wherein ~~said~~ clamps are placed at two sides of a grid bar to constitute a grid funnel and said clamps act as overflow weirs.

Claim 25 (previously presented): The grid falling film devolatilizer according to Claim 24, wherein one said grid bar is disposed above two adjacent clamps that belong to two neighboring grid funnels respectively, and the width of the said grid bar is no less than the interval between the two clamps thereunder; and wherein said grid funnels in two adjacent grid trays cross at 90 degrees, or alternatively are arranged in the same direction while the grid funnels are staggered by half an interval of said grid funnel.

Claim 26 (previously presented): The grid falling film devolatilizer according to the Claim 24, wherein said grid funnels in two adjacent grid trays are arranged in the same direction but staggered by half an interval of grid funnel.

Claim 27 (currently amended): The grid falling film devolatilizer according to Claim ~~13~~ 11, wherein the grid bars in said grid trays are arranged in such a manner that width of grid gaps in said grid trays are gradually increased from top to bottom.